

polypropylene, this refill body being removable to enable its replacement. Locking means (3) engage the two portions of the casing on closure. A simple key pushed into the openings (9) enables the device to be opened. The refill body comprises a deformable substrate (4) of a foam material, which forms the ceiling section of the interior of the device and provides the necessary reduction in the floor-to-ceiling distance. The foam material may also be covered with a thin layer of plastics material, e.g., polypropylene. The surface of the substrate (4) is coated with an insecticidal paste (5). In alternative embodiments, the refill body merely comprises a solid curved structure of plastics material, preferably polypropylene, and the surface is coated with the insect control agent. In the embodiment shown, the refill body also has a region (6) adapted to receive a tablet (7) of attractant to the target insect. The entrance/exit regions of the device incorporate baffles (8) which form maze sections (10). Such sections minimize user accessibility to the treated refill body while providing a minimal barrier to movement of the insect into the device. Ganging fixings (11) and (12) are shown on the external side walls of the device.

In use, the target insect enters the device in the direction of the arrow shown in FIG. 1b. The sloping ceiling allows for contact by different development stages of the target insect and also permits the insects to progress further into the device until contact with the ceiling and resultant transfer of the insecticide occurs. The smallest development stages of the target insect and also some adults may be able to pass through the device, contacting the treated portion where the floor-to-ceiling distance is at its minimum.

In FIGS. 2a and 2b, the positioning of a device of FIGS. 1a and 1b is illustrated, in a horizontal position and a vertical position respectively. The device is held in the vertical orientation by means of adhesive pads. These are also preferably used for a horizontal positioning to prevent the device from being inadvertently moved. FIG. 2c illustrates the use of several devices fixed together by means of male and female fixings (11) and (12) respectively, thus increasing the overall catchment area.

FIG. 3 illustrates the simple procedure for loading the refill body into the device and also for unloading the refill body.

In FIG. 4, typical dimensions of the device for the control of the German cockroach (*Blattella germanica*) are: a=10.5 cm, b=5 cm, h=0.8 cm, a1=12 cm, b1=6 cm but these dimensions may vary with the species and behavior of the target pest. A solid plastic casing (1) forms the walls and the roof of the device, which is fixed on a cardboard base (13). The interior ceiling (14) has a convex interior surface (15) such that the height between it and the cardboard base is about 0.7 centimeter at the entrance and the exit of the device (c), and about 0.2–0.3 centimeter at the center inside the device (d).

In FIG. 5, the interior ceiling (14) of FIG. 4, consists of a convex aluminium foil (16), where the exterior surface is the interior surface of the ceiling (15), which foil covers a cotton wool pad (17) located between (16) and a plastic backing (18). Structure (14) is fixed to the interior surface of the roof of the device.

In FIG. 6, the interior ceiling (15) consists of aluminium foil the convex shape of which is provided by fixing the foil over dental rolls (19) fixed on a cardboard base (20), to provide a specific minimum floor-to-ceiling distance within the tunnel. The ceiling is, however, unsupported between the edge of the roof and the lowest point. FIG. 6 also shows the treated surface (5). The dimensions of this device used for

controlling *Blattella germanica*, are preferably of the order: i=1.7 cm, j=k=10 cm, m \geq 0.2 cm.

Activity Example

In laboratory tests, a single device according to the invention containing 0.3 g of a 5% w/w deltamethrin paste caused 100% kill of adult *Blattella germanica*, *Blatta orientalis* and *Periplaneta americana* cockroaches, from the susceptible laboratory strains, in a 1.1 \times 1.1 m arena that contained harborage, food and water. Under identical conditions, using a strain of *Blattella germanica* which was 20 times more resistant to deltamethrin, 94% males and 50% females were killed overnight. In three dimensional (2.5 \times 2.5 \times 2 m) arenas, with food, water and harborage, two devices caused a 50% reduction (100% males, 70% females and 30% nymphs) of a mixed age population of the susceptible *Blattella germanica* strain within 72 hours.

In field trials at two locations in an infested kitchen area, localized placement devices of the present invention, containing 0.3 g of a 5% w/w deltamethrin paste formulation reduced the *Blattella germanica* population by 60–95% after one week. The cockroach population was more than 20 times more resistant to deltamethrin than the laboratory strain.

I claim:

1. A device for the control of crawling pests, said device comprising:

a tunnel into which a crawling pest may enter, the tunnel having a floor, a ceiling and a gap between the floor and the ceiling, at least a portion of an interior surface of the tunnel ceiling treated with a suitable pest control agent, wherein the gap between floor and ceiling in a treated area progressively decreases in the direction of crawl; such that a pest entering the device may encounter said treated surface of said ceiling as a result of crawling into said progressively decreasing gap and receive upon contact with the treated surface a dose of the agent topically on the pest's upper parts.

2. A device according to claim 1 in which the floor of the tunnel is flat.

3. A device according to claim 2 in which at least a small floor-to-ceiling gap is maintained over substantially all of the treated area.

4. A device according to claim 2 in which the ceiling is convex.

5. A device according to claim 2 in which the ceiling is movable upon contact with the target pest.

6. A device according to claim 5 in which a compressible padding material is located between the interior and exterior surfaces of the ceiling adjacent to the movable surface.

7. A device according to claim 2 which, in order to limit user exposure to the pest control agent further comprises, at both ends of the tunnel, a portion of the interior surface of the ceiling which is not treated with the pest control agent.

8. A device according to claim 2 which further comprises baffles at each entrance which do not obstruct target pests entering the device.

9. A device according to claim 8 in which at least a small floor-to-ceiling gap is maintained over substantially all of the treated area, the ceiling is convex and movable on contact with the target pest and at both ends of the tunnel, a portion of the interior surface of the ceiling is free of the pest control agent.

10. A device according to claim 9 in which a compressible padding material is located between the interior and exterior surfaces of the ceiling adjacent to the movable surface.

11. A device according to claim 10 in which the treated portion is a light, deformable, movable structure that is